

MOBILE POWER PLANT

The object of the invention is to produce an operating plant which is able to generate
5 electricity, to operate free of harmful emissions and nevertheless be capable of being
set up anywhere.

In order to meet this object in an inventive manner there is required a container (1), a
drive unit (4), a generator (3), an exhaust pipe (2), an exhaust heat exchanger (6), a
10 drive shaft with transmission (5), an aerating and de-aerating installation (9), a
control system (7) with GPS-GSM monitoring system and a tank (10) integrated in
the container, a door (13) and a hydraulic plant (12) for opening the front side. This
invention has the object of producing electricity without harmful emissions and to be
mobile. In order to meet this requirement, there is needed an installation system
15 comprising a container (1) having a length of 2m up to 12m and a width of 1 m up to
3m and a height of 1m up to 3m. The framework of this container (1), depending on
size, consists of steel, aluminium or light metal, at the bottom panel at each corner
special rubber buffers (11) being fitted in order to absorb any vibrations. The walls of
this container (1) comprise a sandwich panel system composed of aluminium or steel
20 sheet, the foam filling amounts to 5cm-15cm of an insulation material which has the
object of insulating against noise and heat. Due to this inventively solved effort it is
possible to place and set up this plant anywhere. The special injection system which
is to be used permits the employment of all conventional combustion engines. Due
to the use of fuel - water mixtures such as methanol - water or the employment of
25 natural gas it is possible to speak of a power plant which produces zero pollutants.
The drive unit (4) which may have an output of 100HP up to 20.000HP permits it to
use generators (3) with an output of 0,2MW up to 7MW. Using the new generation
of generators it is even possible to attain outputs up to 10MW. The control system
(7) with built-in GPS-GSM monitors the plant and controls and optimises its power
30 demand depending on requirements. This task is performed by the control system
(7) which is connected to the drive aggregate (4), the generator (3) and the tariff
regulators (14). The object of this control system (7)

is accordingly to monitor and to control the entire plant, to switch off the drive unit or set it going again depending on requirements, optimising the rate of rotation and to take care that the generator produces the demanded amount of electricity. The means integrated into the control system (7) such as the tariff regulator (14) which is responsible for the optimised electricity supply factor together with the GPS-GSM monitoring system have the object to immediately transmit mal-performance reports and when required, maintenance can be performed by remote means. This control system (7) also permits communicating and operating with more than one plant.

Due to this inventive innovation one is able to provide a ring circuit, this in turn would mean that, by means of this invention of a mobile power plant an installation system has been created which can supply whole cities with electricity without the need of establishing expensive installations or constructing these, and in addition it is to be remembered that this invention generates power without the emission of pollutants and this installation system can be set up where ever it is required, Such as protective security housing complexes, hospitals, social establishments, factories in social regions where power supply is not possible. This invention also offers the advantage that large cities can be equipped with a ring circuit system, controlled by the control system (7) and the tariff regulator (14). This invention also only makes it possible that in future no power failures can arise because the plant is self-controlling and because this is prevented by the tariff regulator (14). For cities having such a ring circuit system this would mean that their own power supply is secured by buried cables, no feed power system is required anymore and no dependency on third parties. For the required energy in order to be able to operate this plant, a tank system (10) is installed in this container (1). This integrated tank (IO) has the advantage of independence, it is no longer necessary to set up a separate tank, no feed lines are required which need to meet local regulations and accordingly this mobile power plant can be operated at any time and any place without diverse regulations having to be met. The high energy output and the fact that the mobile power plant produces electricity without pollution makes this invention what it is, that is to say, unique.

The exhaust heat generated by the operation of the drive unit (4) is discharged through the exhaust pipe (2). The exhaust gas heat exchanger (6) installed in the exhaust pipe (2) permits to so utilise the waste heat that this can be employed for hot
5 water preparation as well as for the new process of refrigeration. This once again means a 100 % utilisation of the energy input.

- 1 Container/Module
- 2 Exhaust Pipe
- 10 3 Generator
- 4 Drive Unit
- 5 Drive Shaft with Transmission
- 6 Exhaust Gas Heat Exchanger
- 7 Control System with GPS-GSM
- 15 8 Air Filter Plant for Aggregate
- 9 Aeration and Venting
- 10 Tank
- 11 Rubber Buffers
- 12 Hydraulic Plant
- 20 13 Door
- 14 Tariff Regulator
- 15 Fuel Pump
- 16 Fuel Control System